

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the following remarks.

Claims 1 and 12 were rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Claims 1, 6 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over US 2004/0252670 to Rong et al. (hereinafter, “Rong”) in view of US 2005/0152279 to Robertson et al. (hereinafter, “Robertson”) and further in view of US 5,930,305 to Leib (hereinafter, “Leib”). Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Rong in view of Robertson and Leib, and further in view of US 2003/0073409 to Nobukiyo et al. (hereinafter, “Nobukiyo”). Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Rong in view of Robertson and Leib, and further in view of US 2004/0066754 to Hottinen et al. (hereinafter, “Hottinen”). Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Rong in view of Robertson and Leib, and further in view of US 6,735,178 to Srivastava et al. (hereinafter, “Srivastava”). Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Rong in view of Robertson and Leib, and further in view of US 2004/0162073 to Yoneyama et al. (hereinafter, “Yoneyama”). Claims 8 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over US 2002/0136271 to Hiramatsu et al. (hereinafter, “Hiramatsu”) in view of US 5,991,285 to Ghosh (hereinafter, “Ghosh”) and Leib. Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hiramatsu in view of Ghosh and Leib and further in view of Nobukiyo. Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hiramatsu in view of Ghosh and Leib and further in view of US

2005/0037766 to Hans et al. (hereinafter, "Hans"). The Applicants respectfully traverse based on the points set forth below.

35 U.S.C. §112, First Paragraph Rejections

The Office Action (pg. 3) alleges that the features of: "...wherein the first channel quality indicates an MCS, with which the control channel is to be received at a predetermined error probability, the second channel quality indicates an MCS, with which the data channel is to be received at a predetermined error probability," as recited by claim 1, are not supported by the written description in the specification. However, as noted in the Office Action, paragraph [0086] of the published U.S. application discloses:

"In the above embodiments, channel quality estimation and measurement can be performed using a reception SNR, reception SIR, reception SINR, reception CINR, received power, interference power, bit error rate, throughput, an MCS that enables a predetermined error rate to be achieved, and so forth" (emphasis added)

Furthermore, paragraphs [0029]-[0032] clearly describe that channel quality estimation can indicate the quality of the channel at reception according to aspects of the present invention. Thus, the specification clearly allow persons of ordinary skill in the art to recognize that the Applicants invented these claimed features recited by claim 1. See MPEP 2163.02; see also In re Gosteli, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

Accordingly, it is respectfully submitted that the rejections under 35 U.S.C. §112, first paragraph should be withdrawn.

Claims 1 and 12

Claim 1 is directed towards a base station apparatus and recites the features of:

“1. A base station apparatus comprising:

a reception section that receives first channel quality of a control channel to transmit control information, which includes assignment information of a data channel or modulation and coding scheme (MCS) information, and receives second channel quality of the data channel, wherein the first channel quality indicates an MCS, with which the control channel is to be received at a predetermined error probability, the second channel quality indicates an MCS, with which the data channel is to be received at a predetermined error probability, and the first channel quality is independently measured and different from the second channel quality;

a selection section that selects, from among a plurality of mobile stations, a mobile station to which the data channel is assigned, the selection of the mobile station being in accordance with both the first channel quality of the control channel and the second channel quality of the data channel; and

a transmitting section that performs radio transmission of data to the selected mobile station.” (emphasis added)

The base station apparatus of claim 1 enables interference in an adjacent cell and a reduction in channel capacity to be suppressed, and further enables a drop in throughout to be prevented. (see, e.g., par. [0010] of the published U.S. application).

Despite the allegations in the Office Action, Rong fails to teach or suggest the feature of: “...a reception section that receives first channel quality of a control channel to transmit control information, which includes assignment information of a data channel or modulation and coding scheme (MCS) information,” as recited by claim 1. The Office Action (pg. 4) alleges that Rong teaches this feature at paragraphs [0029]-[0031]. Rong teaches that a base station BS 20 receives a NACK message transmitted on a control channel 24a (see paragraphs [0030] and [0031]). However, the NACK message disclosed by Rong is simply information used to request a retransmission from the BS 20 when a reception error is detected at the mobile station 22. The NACK message disclosed by Rong does not, however, indicate

channel quality of the control channel 24a. Furthermore, Rong does not mention anything about the control channel 24a being used to transmit assignment information of a data channel or MCS information.

Robertson is directed towards a technique of downlink power control in the presence of time varying interference in wireless communications networks, for example, in 3GPP W-CDMA communications networks, including methods in wireless communications devices connected to the network. In paragraphs [0014]-[0017], Robertson mentions estimating the SIR of a dedicated control channel. However, Robertson does not disclose that the dedicated control channel which the target of the SIR measurement is used to transmit assignment information of a data channel or MCS information.

Therefore, neither Rong nor Robertson, whether considered individually or in combination, teach or suggest the feature of: "...a reception section that receives first channel quality of a control channel to transmit control information, which includes assignment information of a data channel or modulation and coding scheme (MCS) information," as recited by claim 1. Claim 12 recites substantially the same subject matter distinguishing apparatus claim 1 from Rong and Robertson, though does so with respect to a method. Accordingly, allowance of claims 1 and 12 and all claims dependent therefrom is warranted.

Claim 8

Claim 8 is directed towards a mobile station apparatus and recites the features of:

"8. A mobile station apparatus comprising:

a first measuring section that measures a first channel quality of a control channel to receive control information including assignment information of a data channel or modulation and coding scheme (MCS) information, wherein

the first channel quality indicates an MCS, with which the control channel is to be received at a predetermined error probability;

a second measuring section that measures a second channel quality of the data channel, wherein the second channel quality indicates an MCS, with which the data channel is to be received at a predetermined error probability, and *the first channel quality is independently measured and different from the second channel quality;*

a generation section that generates channel quality information from the measured second channel quality of the data channel; and

a determination section that determines, in accordance with the measured first channel quality of the control channel, whether or not the channel quality information of the data channel is to be transmitted.” (emphasis added)

The Office Action (pg. 12) alleges that Ghosh teaches the features of: “*...a first measuring section that measures a first channel quality of a control channel to receive control information including assignment information of a data channel or modulation and coding scheme (MCS) information, wherein the first channel quality indicates an MCS, with which the control channel is to be received at a predetermined error probability,*” and specifically alleges that col. 1, lines 20-23 of Ghosh teach that a “mobile station transmits power control data bit (i.e. generated channel quality information) based on result of both control and communication (i.e. data) channels’ measured SIRs.

However, Ghosh does not teach that that a mobile station transmits power control data bit (i.e. generated channel quality information) based on the result of both control and communication (i.e. data) channels’ measured SIRs, as alleged by the Office Action. Instead, Ghosh teaches that “[t]he mobile station transmits the power control data bit to the base station via a wireless communication uplink.” Thus, Ghosh teaches that the mobile station necessarily transmits the power control data bit to the base station (i.e., the power control data

bit is always transmitted), regardless of measured SIRs.

In contrast, claim 8 recites the features of: “*...a first measuring section that measures a first channel quality of a control channel to receive control information including assignment information of a data channel or modulation and coding scheme (MCS) information, wherein the first channel quality indicates an MCS, with which the control channel is to be received at a predetermined error probability.*” and “*...a determination section that determines, in accordance with the measured first channel quality of the control channel, whether or not the channel quality information of the data channel is to be transmitted.*” According to these features, “*channel quality information of the data channel*” is transmitted based on the “*measured first channel quality of the control channel*.” Ghosh does not teach transmitting “*channel quality information of the data channel*,” as recited by claim 1, because the power control data bit is not the same as channel quality information of a data channel. Furthermore, Ghosh also does not teach transmitting information based on the “*measured first channel quality of the control channel*,” as recited by claim 1.

Moreover, Hiramatsu fails to cure these deficiencies of Ghosh.

Accordingly, the Applicants respectfully submit that even if Hiramatsu and Ghosh were combined as proposed in the Office Action, the combination would still lack at least the above-noted features of claim 8, and allowance of claim 8 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a personal communication, the examiner is requested to e-mail the undersigned at the address listed below to set up a telephone discussion.

Respectfully submitted,

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